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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/315,688	05/20/1999	EDWARD SHANBROM	38786.00069	6828

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EXAMINER

OLSEN, KAJ K

ART UNIT

PAPER NUMBER

1753

22

DATE MAILED: 08/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-22

Office Action Summary	Application N 09/315,688	Applicant(s) SHANBROM, EDWARD	
	Examiner Kaj Olsen	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 6-9 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Claim 6 has been amended to provide specific limitations concerning the use of the method for the determination of relative amounts of simple soluble dietary antioxidants and complex tannins. These new limitations have partial prior specification support on page 11 of the disclosure where the applicant discovered that simple antioxidants react very rapidly while complex tannins react more slowly. However, the specification does not appear to provide support for specific steps such as the step of measuring a second slope over a time period from one minute to at least five minutes. Page 11 of the specification only states generally that different slopes are being compared, but doesn't state anything about the specifically defined slopes of claim 6.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen (Chemical Sensors, vol. 15, pp. 295-297 (1995) in view of Coetzee (S. Afr. Tydskr, Chem., vol. 44, pp. 22-24 (1991)) with or without the further teaching of Alexander et al (Proceedings of the International Symposium on Povidone, 1983).

6. Chen discloses a method of determining the level of dietary antioxidants (i.e. ascorbic acid) in a dietary material (a beverage) by exposing a liquid sample to iodine solution and measuring the concentration of iodide ions using an iodide-cyanide selective electrode (see translation of Chen provided in a previous office action). Chen did not disclose the use of a solution of iodine with an iodophor. However, Coetzee in an alternate analytical technique discloses that iodine complexed with iodophors such as polyvinylpyrrolidone is a preferable source of iodine due to its greater stability than that of iodine solutions (see first paragraph). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize an iodophor in order to stabilize the source of iodine.

7. Although Chen does not explicitly teach performing the analysis at room temperature, Chen does suggest normal (i.e. room) temperature is useable, but the reaction progresses at a slower rate than would occur at an elevated temperature (p. 3 of translation, lines 12 and 13). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the method disclosed by Chen at room temperature, provided that one were willing to forgo the advantages of quicker reaction times, in order to obviate the need for stable

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sources of elevated temperature such as a water bath. A water bath is not very portable and obviating the use of it would allow the method of Chen to be more easily transportable.

8. Furthermore, Alexander teaches that the iodophor (i.e. polyvinylpyrrolidone) iodine complex of Coatzee reacts very rapidly with ascorbic acid at temperatures near room temperature (see first three lines of "Stoichiometric Assays" on p. 275 and paragraph four of p. 277). Hence, it would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Alexander and utilize room temperature instead of the elevated temperatures of Chen because those elevated temperatures are unnecessary when the iodine is complexed to a iodophor. One possessing ordinary skill in the art would bother to utilize elevated temperature when they have been determined to be unnecessary for successful reactions to occur.

9. With respect to measuring an increase in the concentration of iodide ions, the technique of Chen depends on the fact that the iodide concentration increases as the reaction with the antioxidant proceeds over some time frame suitable for ensuring a completed reaction. If the iodine-iodophor complex reacts with a number of antioxidants as the applicant evidences, then the increase that would be experienced by Chen in view of Coatzee (with or without Alexander) and the final measurement would inherently correspond to a composite measure of those dietary antioxidants regardless of whether Chen recognized that other antioxidants would contribute to the increase in iodide ions.

10. Claims 1-3 in the alternative are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view Coetzee and with or without Alexander, and in further view of Motonaka et al (Bunseki Kagaku (1995), 44(12), pp. 1013-1019).

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11. Chen and Coatzee (with or without Alexander) set forth all the limitations of the claims (see discussion above). With respect to the limitation requiring that the increase in iodide ions be a result of a composite measure of dietary antioxidants, the examiner took the position above that this was an inherent result of the use of iodine. In other words, there is nothing in claim 1 that requires the prior art to recognize that the iodine in question would have reacted with other antioxidants in the dietary sample. However, Motonaka recognizes that iodine is known to react with other known antioxidants like vitamin A and β -carotene to form measurable quantities of iodide ions (see abstract and Scheme 1 on p. 1016). It would have been obvious to one of ordinary skill in the art at the time the invention was being made to utilize the teaching of Motonaka for the method of Chen and Coatzee (with or without Alexander) in order to extend the utility of the analysis to other samples containing a composite of dietary antioxidants.

Allowable Subject Matter

12. Claim 6 is currently free of the prior art because the prior art does not disclose nor render obvious the use of differing slopes as a function of time to determine relative amounts of soluble antioxidants and complex tannins. However, the claim currently contains subject matter that the examiner does not believe was supported by the disclosure (see discussion above). If the applicant were to amend the claim in such a manner that incorporated the above mentioned allowable subject matter without adding new matter to the application, then claims 6-9 would be allowable over the prior art.

Response to Arguments

13. Applicant's arguments filed on 5-30-2003 have been fully considered. In particular, applicant urges that the prior art did not recognize that slope differences in rates of iodine reduction could be utilized to compare "fast simple" antioxidants to "slow complex" antioxidants. The examiner would agree with that conclusion, and has indicated that claim 6 contains allowable subject matter. However, claim 1 doesn't specify anything about "slopes" or fast or slow antioxidants, and hence continues to read on the prior art as set forth above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 7:00 AM-4:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Nam Nguyen, can be reached at (703) 308-3322.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for regular communications is (703) 305-3599 and the fax number form after-final communications is (703) 305-5408.

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Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

A handwritten signature in black ink, appearing to read 'Kaj K. Olsen', with a long horizontal flourish extending to the right.

Kaj K. Olsen
Patent Examiner
AU 1753
August 6, 2003